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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,997

04/28/2005

Helmut J W Meyer

60469-212; OT-5043

1645

7590

04/27/2006

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EXAMINER

NICHOLSON III, LESLIE AUGUST

ART UNIT

PAPER NUMBER

3651

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/532,997

Applicant(s)

MEYER ET AL.

Examiner

Leslie A. Nicholson III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4/28/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. The abstract of the disclosure is objected to because it does not appear on a separate page as provided in MPEP § 608.01(b).
2. The use of the trademark KEVLAR® has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-6,18-22,24, and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Fargo USP 6,997,302.

Fargo discloses a similar device comprising:

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- A first portion (36) adapted to carry tensile loads on the link
- A second portion (38) adapted to engage a drive member, said second portion not carrying said tensile loads (fig.5)
- A plurality of steps (24)
- At least one panel member adjacent each step (side of each step)
- a drive member (34,35)
- a plurality of metal stepchain links (36) each having a plurality of teeth (38,72) made of an integrated piece of material that engages a corresponding surface on said drive member (fig.3,5)
- wherein each of said plurality of teeth of said plurality of stepchain links have a substantially constant teeth width which is substantially constant across a span between adjacent teeth (fig.5)
- wherein said plurality of teeth of said plurality of stepchain links continually engage said drive member (fig.3)
- wherein said plurality of teeth of said plurality of stepchain links have a substantially constant pitch which is substantially constant across a span between adjacent teeth (fig.5)
- wherein said drive member comprises a non-metallic portion and a metallic portion (it is well known in the art for belts to be made of non-metallic material(s) and sprockets to be made of metallic material(s))

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- wherein each said stepchain link comprises a single piece of die cast metal (C4/L5-7)
- wherein each said stepchain link comprises at least one piece of sheet metal (fig.3,5)
- wherein said stepchain links each include an outer drive member engaging portion having a first side and a second side and a bottom extending therebetween, said bottom having at least some of said plurality of teeth, and said sheet metal piece is secured to said outer portion such that said sheet metal piece carries tensile loads on said links (fig.3,5)
- wherein a distance between said at least one piece of sheet metal is smaller than a width of said bottom of said stepchain links

The applied reference has a common inventor and assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

5. Claims 1-3,10-14,19,20, 26-29, and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Kraft USP 4,232,783.

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Kraft discloses a similar device comprising:

- A plurality of steps (26)
- At least one panel member adjacent each step (side of each step)
- a drive member (44)
- a plurality of metal stepchain links (30) each having a plurality of teeth (84) made of an integrated piece of material that engages a corresponding surface on said drive member (fig.1)
- wherein each of said plurality of teeth of said plurality of stepchain links have a substantially constant teeth width which is substantially constant across a span between adjacent teeth (fig.2)
- wherein said plurality of teeth of said plurality of stepchain links continually engage said drive member (fig.1)
- wherein each said stepchain link comprises at least one piece of sheet metal (fig.2,8) (C2/L)17-27
- wherein said stepchain links each include an outer drive member engaging portion having a first side and a second side and a bottom extending therebetween (middle links), said bottom having at least some of said plurality of teeth, and said sheet metal piece is secured to said outer portion such that said sheet metal piece carries tensile loads on said links (fig.8)

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- wherein a distance between said at least one piece of sheet metal is smaller than a width of said bottom of said stepchain links (fig.8)
- wherein each stepchain link includes at least two sheet metal pieces secured to said outer portion, said sheet metal pieces of one of said stepchain links secured to said sheet metal pieces of an adjacent stepchain link, said outer portions of adjacent links not contacting each other (fig.8)
- wherein said sheet metal piece include lateral openings and said first and said second sides of said outer portion include corresponding openings and including an attachment member (36) received through said openings to secure said outer portion to said sheet metal pieces (fig.8)

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 18-24 and 26-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fargo USP 6,997,302 (or Kraft USP 4,232,783) in view of Stuffel USP 6,450,316.

Fargo (or Kraft) discloses all the limitations of the claim (see ¶4,5) and further disclose a plurality of steps, but does not expressly disclose at least one panel member

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adjacent each step or each of said plurality of stepchain links including a support that at least partially supports a bridge positioned between said at least one panel member of adjacent steps.

Stuffel teaches at least one panel member (30) adjacent each step or each of said plurality of stepchain links including a support that at least partially supports a bridge positioned between said at least one panel member of adjacent steps (inherent, if not disclosed from fig.1 the stepchain links carry the bridges and steps) for the purpose of supporting the rollers of the chain links (C2/L51-56).

At the time of invention it would have been obvious to one having ordinary skill in the art to employ at least one panel member adjacent each step or each of said plurality of stepchain links including a support that at least partially supports a bridge positioned between said at least one panel member of adjacent steps, as taught by Stuffel, in the device of Fargo (or Kraft), for the purpose of supporting the rollers of the chain links.

8. Claims 7,8,9,25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fargo USP 6,997,302 (in view of Stuffel USP 6,450,316) (further) in view of Tanigawa USP 6,213,278.

Fargo discloses all the limitations of the claim (see ¶4,5), but does not expressly disclose said die cast metal selected from the group consisting of aluminum and magnesium.



Tanigawa teaches die cast metal selected from the group consisting of aluminum and magnesium (C1/L53-54) for the purpose of choosing a material that is both strong and lightweight.

At the time of invention it would have been obvious to one having ordinary skill in the art to employ die cast metal selected from the group consisting of aluminum and magnesium, as taught by Tanigawa, in the device of Fargo, for the purpose of choosing a material that is both strong and lightweight.

Fargo further discloses the drive assembly wherein a first of said stepchain links includes a first end having a first hole and a second end having a second hole and a second of said stepchain links includes a third end having two spaced apart portions each including a third spaced apart hole and a fourth end having two spaced apart portions each including a fourth spaced apart hole, and each of said first end and said second end of said first of said stepchain links is received at least partially between one of said third end having two spaced apart portions and said fourth end having two spaced apart portions, and including an attachment member received through said holes to secure said first end and said second end of said one stepchain links to one of said third end and said fourth end of said another stepchain links (fig.3,5)

9. Claims 15 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fargo USP 6,997,302 (in view of Stuffel USP 6,450,316) (further) in view of Green USP 5,520,585.

Fargo discloses all the limitations of the claim (see ¶4,5), and further discloses a plate (of 38) having a plurality of teeth (38) secured on said bottom having some of said plurality of teeth (of 38 and 72), but does not expressly disclose the teeth being that of plastic.

Green teaches teeth being of plastic for the purpose of using a lightweight, non-rusting, self-lubricating material (abstract).

At the time of invention it would have been obvious to one having ordinary skill in the art to have said plurality of teeth being that of plastic, as taught by Green, in the device of Fargo, for the purpose of using a lightweight, non-rusting, self-lubricating material.

10. Claims 16,17,31, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fargo USP 6,997,302 (in view of Stuffel USP 6,450,316 (see ¶7)).

Fargo does not expressly disclose specific values for an interface (of 38) between said drive member and said plurality of metal stepchain links (36,72). However, one of ordinary skill in the art is expected to routinely experiment with the parameters, especially when the specifics are not disclosed, so as to ascertain the optimum or workable ranges for a particular use. Accordingly, it would have been obvious through routine experimentation and optimization, for one of ordinary skill in the art to have the interface between the drive member and plurality of metal stepchain links to be 65 mm.

***Conclusion***

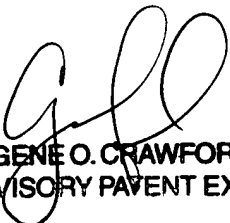
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leslie A. Nicholson III whose telephone number is 571-272-5487. The examiner can normally be reached on M-F, 8:30 AM - 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on 571-272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

L.N.  
4/25/2006

  
GENE O. CRAWFORD  
SUPERVISORY PATENT EXAMINER